

Rec'd PCT/PTO 22 MAR 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



528629

(43) International Publication Date
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number
WO 2004/028717 A1

- (51) International Patent Classification⁷: **B09C 1/08**, C09K 17/00
- (21) International Application Number:
PCT/GB2003/004181
- (22) International Filing Date:
26 September 2003 (26.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0222393.1 26 September 2002 (26.09.2002) GB
- (71) Applicants (*for all designated States except US*): **UNIVERSITY OF BRIGHTON** [GB/GB]; Mithras House, Lewes Road, Brighton, Sussex BN2 4AT (GB). **UNIVERSITY OF SUSSEX** [GB/GB]; Falmer, Brighton, Sussex BN1 9QJ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **CUNDY, Andrew, Brian** [GB/GB]; 5 Thurlow Road, Worthing, Sussex BN11 2JB (GB). **HOPKINSON, Laurence, James** [GB/GB]; 22 Station Road, Sholing, Southampton, Hampshire SO19 8HH (GB).
- (54) Title: **METHOD FOR SOIL REMEDIATION AND ENGINEERING**
- (57) Abstract: An electrokinetic method for groundwater protection, soil remediation and engineering which comprises applying an electric field across an area of soil, sediment or slurry so as to generate a pH and Eh gradient and thereby promote the in situ precipitation of a stable iron-rich band. The method may be performed for the purpose of stabilisation and/or strategic dewatering/rewatering of soils, sediment and/or slurries, the improvement of the physical properties of soils and sediments for engineering purposes, the forced and directed migration of contaminated leachates, and/or electro-osmotic purging of non-polar contaminants.
- (74) Agents: **GAUNT, Robert, John et al.**; Stevens Hewlett & Perkins, Halton House, 20/23 Holborn, London, Greater London EC1N 2JD (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:
— of inventorship (Rule 4.17(iv)) for US only
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2004/028717 A1